Tarefa Básica - Fatorial

01 a) $4! = 4.3.2.1 = \boxed{24}$

b) $5! - 6!$

$5! - 6.5!$

$5!(1-6)$

$120.(-5) = \boxed{-600}$

c) $\frac{9!}{6!} = \frac{362.880}{720} = \boxed{504}$

$6! = 720$

$9! = 9.8.7.6!$

$9! = 504.720 = 362.880$

d) $\frac{98!}{100!} = \frac{1}{9.900}$

$100! = 100.99! = 9.900$

02 $\frac{1}{m!} - \frac{m}{(m+1)!}$

03 $\frac{(m!)^2 - (m-1)!\,m!}{(m-1)!\,m!} = m - 1$ (A)

04 $\frac{(m+2)!\,(m-2)!}{(m+1)!\,(m-1)!} = 4$ (A)

05 $\frac{(m+1)! - m!}{(m+1)!} = \frac{7}{m+1}$

$\frac{(m+1)!\,[(m-1).m - m]}{(m+1)!} = \frac{7}{m+1}$

$\frac{(m+1).m.(m-1)! - m(m+1)!}{(m+1)!} = \frac{7}{m+1}$

$\frac{m^2 - m + m}{1} = \frac{7}{m+1}$

$m^2 = 7$

$m = 0$

06 $(m-1)!\,[(m+1)! - m!] = (m!)^2$ (D)

07 $\frac{m! + (m-1)!}{(m+1)! - m!} = \frac{6}{25}$ $\quad m = 5$ (C)

08 $21! - 221$ (D)